

**REMARKS**

Claims 1-12, 14-16, 18-28, and 32-33 are pending in the application.

Claims 5-10, 12, 22-25, 27, 32 and 33 were allowed.

Claims 1-4, 11, 14-16, 18-21, 26 and 28 have been rejected.

Claims 14-16 have been canceled.

**CLAIM REJECTIONS - 35 U.S.C. §103**

Claims 1-4 and 11; and 18-21, 26, 28 were rejected under 35 U.S.C. 103(a) as being unpatentable over Steinmetz 61772. In response, each of claims 1 and 18 have been amended to make clear that the tool of the present invention are for high-speed blending, i.e., blending in which the tip of the shank moves faster than 20 meters per second. This distinction clearly distinguishes the present invention from the butter churn in Steinmetz. Although the churn in Steinmetz does not disclose its tip speed, a churn by its very nature moves comparatively slowly and in a relatively viscous fluid. Moreover, the churn in Steinmetz is designed with a wooden box housing to be turned by hand. One skilled in the art of high-speed blending would clearly not look to 140-year old art concerning butter churns. Claims 1 and 18 are accordingly allowable under 35 U.S.C. 103(a) over Steinmetz.

As taught by In re Horn, 203 USPQ 969 (CCPA 1979), even prior art that achieves its result using the same scientific principle as the present invention cannot be used as analogous prior art if one of ordinary skill in the art would not be expected to look at such art:

For the teachings of a reference to be prior art under Section 103, there must be some basis for concluding that the reference would have been considered by one skilled in the particular art working

on the pertinent problem to which the invention pertains. In re Horn, id at 971.

See also, In re Clay, 966 F.2d 656, 23 USPQ2d 1058 (Fed. Cir. 1992); In re Oeticker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992); Wang Laboratories, Inc. v. Toshiba Corporation, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. (1993).

With respect to the Office Action argument that identification of the ranges of angles identified in the claims requires merely "routine skill in the art", Applicants note, as explained in the Specification at page 14, lines 14-page 15, line 3, Applicants believe that their understanding of the physics of the tool is novel. Unless the butter chums in Steinmetz and in most blades of the prior art, the goal of the present blade is NOT to mix fluids or even to mix particles or powders. Instead, as explained in the Specification at page 25, lines 16-25, the goal is the unusual goal of impacting tiny particles (toner surface additives in the range of 30 to 50 nanometers in diameter) into somewhat larger but still small particles (toner particles in the 4-30 micron range). These impacts must be with sufficient force that the tiny surface additives strongly adhere to the toner particles. This is NOT "routine" in the blending arts. The Office Action simply describes the role of the blending tool as providing "an effective deflection of the material to cause a kinetic change in flow that is imported to the fluid to be processed....." As explained above and in the Specification, this misstates and misunderstands the goal of the invention and its effects. The invention and selection of the tool angle with respect to the blender vessel wall required understanding of complex fluidized particle behavior within the vortices and "still" areas caused by the shape and orientation of the tool. Such complex physics directed toward maximizing impaction forces rather than mixing action "with the fluid to be processed" is NOT routine. The reasoning and understanding of the Office Action does not apply to the present invention, and the "official notice" of obviousness is both incorrect and unsupported.

Accordingly, claims 1 and 18 are allowable. Claims 2-4, 11, 19-21, 26, and 28 all depend from either claim 1 or claim 18. Each is also accordingly allowable.

Claims 14-16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Brumagim 2235604. In response, these claims have been cancelled.


**ALLOWABLE SUBJECT MATTER**

Claims 5-10, 12, 22-25, 27 and 32-33 have been allowed.

In summary, all pending claims in the application are believed to be in condition for allowance.

If the Examiner believes personal contact would be helpful for disposition of the case, the Examiner is hereby authorized to contact applicants' representative Richard F. Spooner at (585) 423-5324, Rochester, New York.

Respectfully submitted,



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